

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of Milwaukee Water Works,
Milwaukee County, Wisconsin, for
Authority to Increase Water Rates

Docket 3720-WR-108

Surrebuttal Testimony of Philip Q Hanser

1. INTRODUCTION AND SUMMARY

Q. Please state your name and business address.

A. My name is Philip Q Hanser. My business address is 44 Brattle Street,
Cambridge, MA 02138.

Q. Are you the same Philip Q Hanser who previously submitted direct testimony and rebuttal testimony in this proceeding?

A. Yes. My direct testimony was filed in this proceeding on June 4, 2014 and my rebuttal testimony was filed on June 13, 2014.

Q. What is the purpose of your surrebuttal testimony?

A. I have read the rebuttal testimony simultaneously submitted by MWW and other parties to this proceeding. The purpose of my surrebuttal testimony is to respond to certain issues raised in the parties' rebuttal testimony.

1 **Q. Please provide a summary of your surrebuttal testimony.**

2 A. My surrebuttal testimony addresses demand ratios, the cost of fire protection,
3 mains and meter replacement, the declining block structure of MWW's rates,
4 allocating the cost of transmission and distribution mains, and the spreadsheet
5 version of the cost of service model.

6 **Q. Having reviewed the rebuttal testimony of MWW and the other parties, have**
7 **you substantively revised any of the opinions expressed in your direct**
8 **testimony or your rebuttal testimony?**

9 A. No, although I did notice an error in my rebuttal testimony. Where West Allis is
10 referred to on pages 10 and 11 of rebuttal testimony, it should instead say Brown
11 Deer. This error will be corrected by way of an errata sheet.

12 **2. DEMAND RATIOS**

13 **Q. Do any witnesses offer a response to your direct testimony on demand**
14 **ratios in their rebuttal testimony?**

15 A. Yes. In direct testimony¹ I expressed the opinion that economic efficiency
16 requires that prices be set with reference to forward-looking costs, and that
17 demand ratios should therefore also be set on a forecast basis, or with reference
18 to system design parameters. The only witness to address this point in rebuttal
19 was MWW's witness Mr. Wright. Mr. Wright said that "the use of forecasted

¹ Direct-MillerCoors-Hanser-15–16.

1 system demand ratios is an acceptable approach,” but that he did not believe
2 “that forecasted system demand ratios have a higher probability of being more
3 accurate predictors of actual test-year system operating performance than
4 demand ratios based on recent historical averages.”²

5 **Q. Is Mr. Wright correct that forecast system demand ratios may not be as**
6 **accurate as demand ratios based on recent historical performance in**
7 **predicting test-year system operating performance?**

8 A. Mr. Wright may be correct that recent historical averages may be good predictors
9 of operating performance in the test year. However, the MWW system is
10 designed to meet customer demands in all years, not just in average years.
11 Since system design capacity rather than usage in the average year is what
12 determines a significant proportion of the total costs, efficient prices should be
13 set on the basis of forecast demand in a high-demand year, or system design
14 parameters. Demand ratios in an average year will tend to under-charge
15 customer classes with relatively peakier loads.

16 **3. FIRE PROTECTION COSTS**

17 **Q. What issues have been raised in relation to fire protection costs?**

18 A. The direct testimony of witnesses for the wholesale customers was that
19 wholesale customers should not pay for the cost of fire protection. In rebuttal

² Rebuttal-MWW-Wright-13.

1 testimony, I explained that wholesale customers will pay much less than retail
2 customers under MWW's proposed rates. MWW witnesses indicate that since
3 wholesale customers do in fact receive fire protection services from MWW³ they
4 should pay for it. Commission staff supports the position of the wholesale
5 customers in some aspects, although the staff also recommends a change to the
6 way that fire flows are calculated.⁴

7 **Q. Do you agree with MWW witnesses?**

8 A. I have no independent knowledge of the technical layout of the MWW system,
9 and the nature of the connections between the MWW system and those of the
10 wholesale customers. However, if, as MWW witnesses suggest, wholesale
11 customers can (and have) received increased water supply from the MWW
12 system in order to provide adequate fire flows, they should pay for that service.
13 The testimony of the MWW witnesses suggests that the wholesale customers do
14 indeed receive fire protection services from the MWW system and therefore that
15 they should pay accordingly.

16 **Q. What is your response to the rebuttal testimony of the commission staff in**
17 **relation to fire flows?**

18 A. I do not agree with staff's support of aspects of wholesale customers' positions,
19 for the reasons given above. I have no opinion on the technical merits of the staff
20 proposal to change the way in which fire flows are calculated because this is

³ Rebuttal-MWW-Lewis-8 and Rebuttal-MWW-Pauly-3-4.

⁴ Rebuttal-PSC-Sam Shannon-2-5.

1 outside my area of expertise. However, I note that this proposal has nothing to do
2 with the request of the wholesale customers to avoid paying for fire protection.
3 The staff proposal to change the way that fire flows are calculated should
4 therefore be assessed on its merits independently of the wholesale customers'
5 request.

6 **4. MAINS AND METER REPLACEMENT**

7 **Q. Did MWW address your testimony about the relationship, or lack thereof,**
8 **between the required rate of return and the harsh winters and investment in**
9 **infrastructure?**

10 A. Yes. Ms. Lewis said that the issues are connected. Namely, the supposed
11 connection is "the additional cash that is generated with a higher rate of return.
12 That additional cash is a source of funding for water main replacements,
13 increasingly important after the harsh winter and in response to the urging of the
14 PSC."⁵

15 **Q. Is it correct that an increased rate of return is required to generate cash for**
16 **additional investment in mains replacement?**

17 A. No. As a preliminary matter, I pointed out in my direct testimony that the test year
18 rate base did not change when MWW increased its proposed rate of return. If
19 MWW is planning increased investment in infrastructure, there is no reason for

⁵ Rebuttal-MWW-Lewis-1.

1 that investment and corresponding capital expenditure to be funded from current
2 cash flow. The capital expenditure could be funded by raising debt or from a
3 transfer from the City of Milwaukee (the equivalent of an equity injection).
4 Alternatively, MWW could increase mains replacement activity and reduce the
5 rate of investment in meter replacement.

6 **Q. Are you aware of utilities that support capital expenditure by raising funds**
7 **through external financing rather than using current cash flow?**

8 A. Yes. I believe it is relatively common for utilities to support capital expenditure by
9 using external financing (for example, by issuing bonds or through issuing equity)
10 rather than from current cash flows. For example, American Water, which is the
11 largest publicly-traded water and waste-water utility in the U.S., had capital
12 expenditures greater than cash from operations in two of the last three years,
13 and \$174 million greater in aggregate over the three year period.⁶

14 **Q. Could MWW support its planned investment program through external**
15 **financing?**

16 A. Yes. MWW has so little debt currently that adding even a significant amount of
17 debt to the capital structure would be straightforward. Adding debt in this way
18 would generate enough cash to pay for MWW's capital expenditure program for
19 several years.

⁶ American Water Annual 2013 Annual Report, p. 92, consolidated statement of cash flows. Ex.-
MillerCoors-Hanser-7.

1 **Q. Does Mr. Rothstein agree with you on this point?**

2 A. Yes, I believe so. Mr. Rothstein makes a very similar point in his rebuttal
3 testimony.⁷

4 **Q. Supposing that for some reason MWW was determined to fund**
5 **infrastructure replacement without raising external finance, would it need**
6 **an increased rate of return?**

7 A. No. MWW could control costs to free up cash. Alternatively, MWW could reduce
8 PILOT payments. Or MWW could reduce the rate at which it is replacing meters.

9 **Q. How has MWW responded to your testimony on the issue of meter**
10 **replacement?**

11 A. Ms. Lewis responds in her rebuttal testimony. She says: “Regarding meter
12 replacement, MWW is replacing meters at a rate determined not by their
13 economic life but by their functional life, conformance with PSC requirements for
14 meter testing, and considerations on the most efficient way to do this for current
15 and future ratepayers. The meter replacement program is driven by the
16 replacement of the electronic components as they reach their end of life as well
17 as the replacement of the meters that are reaching their required test cycle.”⁸

⁷ Rebuttal-Wholesale Customers-Rothstein-5-6.

⁸ Rebuttal-MWW-Lewis-2.

1 **Q. How do you interpret Ms. Lewis's statement?**

2 A. I am not certain how to interpret Ms. Lewis's statement, but I believe Ms. Lewis to
3 be indicating that accelerated meter replacement is being driven by the need to
4 replace electronic components. Since MWW is retiring \$3,000,000 of meters and
5 replacing them with \$5,000,000 of additions against a gross plant balance of
6 \$35.3 million at the start of the test year, I infer that between one twelfth and one
7 seventh of the total meter stock is being replaced in one year or, in other words,
8 that the service life of the meters being replaced is between seven and twelve
9 years.⁹ This strikes me as a very short meter service life and a rapid rate of
10 replacement. Furthermore, I understand that this replacement activity is in
11 addition to "normal" replacement activity.¹⁰ Since MWW has roughly 150,000
12 meters, the implied cost per meter ranges between approximately \$225 to \$375.

13 **Q. What is the financial consequence of this accelerated replacement?**

14 A. \$3 million of retirements and \$5 million of additions together mean that the rate
15 base increases by \$8 million, corresponding to a \$430,000 increase in the cost of
16 service.¹¹

⁹ Ex.-MillerCoors-Hanser-8.

¹⁰ This replacement activity is listed as "major" on schedule 3 (Financed Plant), and is in addition to "normal" additions and retirements.

¹¹ Ex.-MillerCoors-Hanser-9. Calculated as \$8 million multiplied by 5.37% rate of return on ratebase. I note that according to MWW's cost of service calculations, major additions and retirements are accounted for as though they take place on January 1st of the test year, and thus earn a full year's return in the test year (see Live Revenue Requirement-Cost of Service-Rate Model dated 5/30/14 and served on parties on 5/31/14, tab "Attachment 13", note A).

1 **Q. How did MWW respond to your concern that MWW is not replacing its**
2 **larger transmission mains?**

3 A. Ms. Lewis agreed that MWW is not replacing any larger transmission mains. Ms.
4 Lewis explained that this is because the larger mains are not failing.¹²

5 Replacing mains only when they fail is unlikely to be good practice, and could
6 lead to very large expenditures concentrated in a short period of time, as well as
7 to service quality problems. Many utilities now use condition surveys to drive
8 preventative capital expenditure programs.

9 **5. THE DECLINING BLOCK STRUCTURE OF MWW'S RATES**

10 **Q. What has been said about declining block rates?**

11 A. Ms. Lewis testified that "MillerCoors benefits significantly from the declining block
12 rate structure offered by MWW, where almost all the company's water usage is
13 billed at the lowest cost block. Indeed, MWW's intent to maintain a declining
14 block rate structure is entirely motivated by our desire to offer every possible
15 advantage to large water-using businesses that we can, within the constraints of
16 fair ratemaking as prescribed by the PSC."¹³

¹² Rebuttal-MWW-Lewis-2.

¹³ Rebuttal-MWW-Lewis-3.

1 **Q. What is your view of declining block rate structures?**

2 A. Declining block rate structures mean that a higher per-unit rate is charged for the
3 water a customer consumes up to a certain threshold quantity, with additional
4 consumption greater than the threshold quantity charged a lower rate.
5 Sometimes there are multiple blocks of consumption, each block having a lower
6 rate. In this case MWW is proposing three blocks for urban industrial customers.
7 Declining block rates have the desirable property of allowing some of the fixed
8 costs of a utility to be recovered in the portion of consumption which is inelastic
9 (that is, relatively unaffected by price), usually the initial blocks of the rate.
10 Declining block rates are therefore a more efficient price signal than a flat
11 volumetric rate without a significant fixed charge component.

12 **Q. Is MWW correct that, through its declining block structure, it is able to**
13 **“offer every possible advantage to large water-using businesses that**
14 **[MWW] can, within the constraints of fair ratemaking as prescribed by the**
15 **PSC”?**

16 A. MWW’s declining block structure has the desirable feature that the last block with
17 the lowest retail price is charged at approximately the same rate that a wholesale
18 customer with the same demand ratio would pay. However, I would be very
19 surprised if the rate at which MWW charges for the last block of consumption
20 (approximately \$1.16 per 100 cubic feet)¹⁴ is close to the marginal cost of

¹⁴ Live Revenue Requirement-Cost of Service-Rate Model dated 5/30/14 and served on parties on 5/31/14, tab “Proposed Urban Rate”, cell D49.

1 delivering additional water. While I am not familiar with all of the “constraints of
2 fair ratemaking as prescribed by the PSC” mentioned by Ms. Lewis, I would
3 expect that the rate for the last block could be reduced significantly while still
4 generating incremental net revenues for MWW. In the long run, a reduced rate
5 would benefit not only industrial customers but also all other users because it
6 would expand demand and thus reduce the dollar amount of fixed costs charged
7 to other users.

8 **6. THE COST OF MWW’S WATER MAINS**

9 **Q. What has been said about the allocation of mains’ costs?**

10 A. In direct testimony, witnesses for the wholesale customers claimed that MWW
11 was re-allocating the cost of distribution mains to transmission. In rebuttal
12 testimony, I explained that MWW’s alternative approach makes sense if inch-feet
13 approximates forward-looking costs. In rebuttal, Mr. Rothstein says “The
14 question, pure and simple, is how much of the water main costs were incurred for
15 transmission versus distribution mains. The answer to this question is known,
16 requiring no estimation procedure or data manipulation.”¹⁵

17 **Q. Do you agree with Mr. Rothstein?**

18 A. No. First, the rhetorical question posed by Mr. Rothstein is the wrong question.
19 As I explained in direct testimony, the relevant measure of costs for determining

¹⁵ Rebuttal-Wholesale Customers-Rothstein-10.

1 prices is a forward-looking one if prices are to be efficient. Second, it is not the
2 case as Mr. Rothstein implies that the split of historical costs between distribution
3 and transmission is known, requiring no estimation or “data manipulation”. Only
4 the undepreciated historical costs are known.

5 **Q. Do you agree with what Mr. Planton says on this issue?**

6 A. No. Mr. Planton claims that that MWW’s inch-feet methodology represents an
7 attempt to “shift costs”.¹⁶ In my opinion, describing MWW’s approach as involving
8 a “shift” of costs is a mis-characterization. The task at hand is to allocate costs
9 appropriately. In my opinion, MWW’s methodology provides a better allocation
10 than does the alternative proposed by witnesses for the wholesale customers.

11 **Q. Do you agree with the comments of Mr. Wright in his rebuttal testimony?**

12 A. Mr. Wright explains that MWW’s inch-feet methodology provides a better proxy
13 for eventual replacement costs, and that the use of original cost introduces
14 biases due to the different ages of otherwise similar assets.¹⁷ I agree with both
15 points.

¹⁶ Rebuttal-Wholesale Customers-Planton-2, 4.

¹⁷ Rebuttal-MWW-Wright-11-13.

1 **7. THE COST OF SERVICE MODEL**

2 **Q. Are there any other points raised in rebuttal testimony to which you would**
3 **like to respond?**

4 A. Yes. I would like to expand on my comments about MWW's cost of service
5 model, in response to the rebuttal testimony of Mr. Brandt.

6 **Q. How did MWW respond to your concerns about the functionality of the cost**
7 **of service model?**

8 A. As far as I am aware, the only MWW witness to say anything about the cost of
9 service model is Mr. Brandt, an employee of Raftelis Financial Consultants, Inc.
10 Mr. Brandt said that the model is not automatic, and that manual checks are
11 required. Mr. Brandt stated that the model does not automatically update the
12 rates, so that the revenue produced by the model may change if the inputs are
13 changed.¹⁸

14 **Q. Does that explain the problem you observed in the model?**

15 A. No. The issue that Mr. Brandt discusses in his rebuttal testimony has nothing to
16 do with the issue I identified in my direct testimony – the revenue requirement
17 calculation.

¹⁸ Rebuttal-MWW-Brandt-2.

1 **Q. What else does Mr. Brandt say about the problem you identified?**

2 A. Mr. Brandt says “We are confident that Mr. Hanser can figure out the manual
3 aspects of the model now that he will have more time to evaluate it. MWW does
4 not believe it has the responsibility of providing a user manual for the model
5 since it views the model as a tool for its use in preparing its rate case.”¹⁹

6 **Q. Is Mr. Brandt correct to view the model as a tool for MWW’s use?**

7 A. I am surprised at the view that Mr. Brandt espouses and seemingly ascribes to
8 MWW. I would think that the purpose of the model is to help MWW demonstrate
9 to its customers and to the PSC that its proposed rates are just and reasonable.
10 As such, I would have thought that it is in the interests of MWW to provide a
11 model that functions correctly and is transparent and easy to use.

12 **Q. Does this complete your surrebuttal testimony?**

13 A. Yes.

¹⁹ Rebuttal-MWW-Brandt-2.